the storage media device is dependant on the number of software products to be distributed by the vendor. In one embodiment, the storage media device is a CD-ROM which can be readily mass produced in a cost effective manner.

According to an aspect of the invention, the storage media devices comprise one or more software products. Each of the software products is encrypted with a unique key code such that the customer can not directly load the software products from the storage media devices onto their computer (CPU).

The apparatus further comprises a separate site configuration file, which is uniquely configured for each customer. The site configuration file is preferably stored on a low cost storage medium, such as a floppy disk, and is also provided to the customer.

The site configuration file includes a list of the software products that the customer is licensed to use. The site configuration file also includes a list of encryption key codes for each of the licensed products. The site configuration file may also include a list of the authorized CPU-IDs. The list of CPU-IDs provides a data base from which to ensure that only licensed computers (e.g., workstations) are being loaded with the licensed software products.

The apparatus further comprises a "loader module". The loader module exercises control over the loading of software products from the volumes of CD-ROM, and is preferably stored on each of the volumes. The loader module is configured to determine whether the host computer is licensed for loading the software products. This is performed by reading the site configuration file to verify that the CPU-ID of the host machine is contained in the CPU-ID list. Once this verification is made, the loader module is then configured to retrieve the encryption keys from the site configuration file. Using these encryption keys, the loader module is configured to decrypt and then load onto the licensed computer only those software products on the storage media devices that the customer is licensed to use.

Another feature of the present invention is that encryption keys for successive releases of a particular software product are re-used such that a customer may be shipped a new volume set of storage media devices and re-use his old site configuration file to load the updated software products. This simplifies mass distribution of software products, because only the site configuration files must be uniquely generated and shipped separately for each customer. The software products themselves are simply duplicated and shipped to every customer.

Another feature of the present invention is that new encryption keys are used for new software products. Thus, combinations of "old" and "new" software products may co-exist on one CD-ROM. For existing customers, only those who license the newly-included software products will need to be shipped a new site configuration file.

Another feature of the present invention is that the software vendor may license third-party vendors to distribute one or more products to their customers. In this situation, the volumes of CD-ROM are sent to the third-party vendor in the same manner as described above. However, the software vendor provides the third-party vendor with the capability of creating its own site configuration files. The third-party vendor then creates a site configuration file for each of its customers. The present invention allows the software vendor to restrict the ability of third-party vendor from creating site configuration files that would "unlock" every software product on the CD-ROM. In this way, the software vendor can allow a third-party distributer to distribute only a portion of the products contained on the volumes of CD-ROM.

Others have attempted to exercise control over the distribution of multiple software products using run time authorization techniques. For various reasons, these techniques do effectively restrict access to un-licensed products. The technique of the present invention utilizes load time authorization. One effect of this is that the customer, in essence, does not even know that the un-licensed products exist on the volume(s) of CD-ROM in his possession.

Other objects, features and advantages of the invention will become evident in light of the following description thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a high level block the diagram showing the environment of the present invention.

FIG. **2** is a high level block diagram showing the architecture of an encrypted CD-ROM storage device.

FIG. **3** is a pictorial illustration showing the architecture of a look-up file.

FIG. **4** is a pictorial illustration showing the architecture of a file set.

FIG. **5** is a high level block diagram showing the architecture of a site configuration file.

FIGS. **6**A and **6**B is a high level flow chart showing the operation of the loader program.

FIG. **7** is a high level flow chart showing the process for configuring the encrypted CD-ROM storage device.

FIG. **8** is a high level block diagram showing the architecture of the CD-ROM mastering tool module which is used to generate the CD-ROM master tape.

FIG. **9** is a high level flow showing the operation of the CD-ROM mastering tool module.

FIG. **10** is a high level block diagram showing the architecture of the CD-ROM mapper module.

FIGS. **11**A–**11**C are a high level flow chart showing the operation of the CD-ROM mapper module.

FIG. **12** is a high level block diagram showing the architecture of the CD-ROM master module.

FIG. **13** is a high level flow chart showing the operation of the CD-ROM master module.

FIG. **14** is a high level flow chart showing the process for configuring the site configuration file.

FIG. **15** is a high level block diagram showing the operation of the site configuration module.

FIG. **16** is a high level block diagram showing the architecture of the present invention when used for third-party distributors.

DETAILED DESCRIPTION OF THE INVENTION

The present invention relates to a technique for allowing a software vendor to distribute multiple software products to a customer for use with an Electronic Computer-Aided Design (ECAD) system. One feature of the present invention is that the customers can only load those products for which they are licensed to use. This feature allows a software vendor to mass distribute multiple software products while allowing customers to load only certain software products. Another feature of the present invention is that customers can only load products onto a licensed ECAD system. This feature allows a software vendor to control which ECAD system the software products are being loaded on. As will be appreciated from the following detailed